

Applicant : Charles M. Olds et al.
For : AUTOMATIC CHANGEOVER REGULATOR
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In the Specification:

Please replace paragraph [0008] with the following amended paragraph:

Fig. 1 is a perspective view showing an exemplary gas regulator embodying the present invention.

Please replace paragraph [0036] with the following amended paragraph:

The two-stage LP gas regulator 10 as described herein is identical to a low pressure two-stage LP gas regulator as sold by Marshall Gas Controls, a division of S.H. Leggett & Co. located in San Marcos, Texas, under the part number 254-00, except that the two-stage gas regulator 10 includes a new convoluted diaphragm 100, a guide 102 and a pair of lower spring cups 104 in the first regulator portion 12. In the illustrated example, gas is supplied to an interior 50 of the first regulator portion 12 through the inlets 16, 18 through a valve seat 52 selectively covered by a lever arm 54 for each inlet 16, 18. In use, the changeover knob 19 is rotated to align a protrusion 55 on the underside of the changeover knob 19 with a spring 56 interconnected with one of the lever arms 54 for a selected inlet 16, 18. The protrusion 55 pushes down on a top piston 58, which compresses the selected spring 56. The selected spring 56 therefore pushes a lower cup 106 surrounding a lower end of the spring 56. The lower cup 104 106 thereafter presses down on a sleeve 108 of the convoluted diaphragm 100, which presses down on a diaphragm post 60 that presses down on a first end 61 of the lever arm 54. When the first end 61 of the lever arm 54 is pressed down, a second end 62 of the lever arm 54 uncovers the valve seat 52 of one of the inlets 16, 18 to open a fluid line from one of the inlets 16, 18 to the interior 50 of the first regulator portion 12. If the pressure in the interior 50 of the first regulator portion 12 raises above a predetermined level, the pressure will push the sleeve 108 of the convoluted diaphragm 100 upward, thereby pushing the diaphragm post 60 upward. Therefore, the diaphragm post 60 will pull the first end 61 of the lever arm 54 upward and move the second end 62 of the lever arm 54 into contact with the valve seat 52 to stop fluid from entering the interior 50 of the first regulator portion 12 from the relative inlet 16, 18.

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Please replace paragraph [0040] with the following amended paragraph:

In a second embodiment of the two-stage LP gas regulator, the gas regulator is identical to the low pressure two-stage LP gas regulator as sold by Marshall Gas Controls, a division of S.H. Leggitt ~~Co.~~ Co. located in San Marcos, Texas, under the part number 254-00, and further includes a spring guide 200 (Figs. 22-25). The spring guide 200 surrounds the springs 56 and maintains the springs 56 over the respective portion of a flat diaphragm (or a pair of flat diaphragms) and the respective post. The spring guide 200 includes a flat plate 202 with a pair of circular apertures 204. Each of the springs 56 is positioned into one of the apertures 204. The spring guide 200 also preferably includes a stiffening rib 206.